

10/512,094

STN-structure Search  
11/3/05

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L8 ANSWER 1 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2005:888946 CAPLUS  
DOCUMENT NUMBER: 143:241958  
TITLE: Methods for treating resistant or refractory tumors  
INVENTOR(S): Caligiuri, Maureen; Wosikowski-Buters, Katja; Casazza, Anne Maria  
PATENT ASSIGNEE(S): GPC Biotech AG, Germany  
SOURCE: PCT Int. Appl., 71 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| WO 2005077385  | A2   | 20050825 | WO 2005-EP1733  | 20050218 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,<br>CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,<br>GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,<br>LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,<br>NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,<br>TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW<br>RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,<br>AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,<br>EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,<br>RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,<br>MR, NE, SN, TD, TG |      |          |                 |          |

PRIORITY APPLN. INFO.: US 2004-546097P P 20040218  
AB The instant invention relates to methods, pharmaceutical compns. and  
packaged pharmaceuticals for treating resistant or refractory tumors by  
administering platinum-based compds.  
IT 215604-74-3, BAY 38-3441  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(methods for treating resistant or refractory tumors)  
RN 215604-74-3 CAPLUS  
CN L-Valine, N-[[[4-[(6-deoxy-3-O-methyl- $\beta$ -L-galactopyranosyl)oxy]phenyl]amino]thioxomethyl]-L-histidyl-,  
(4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyran-3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester, monohydrochloride  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

10/512,094

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
US 2004037802 A1 20040226 US 2002-218167 20020813  
CA 2493329 AA 20040219 CA 2003-2493329 20030813  
EP 1534334 A1 20050601 EP 2003-785231 20030813  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK  
PRIORITY APPLN. INFO.: US 2002-218167 A 20020813  
WO 2003-US25252 W 20030813

OTHER SOURCE(S): MARPAT 140:205131  
AB Activated polymeric bicine derivs. such as, as well as their conjugates are disclosed. Methods of making and using the bicine derivs. as prodrugs for treatment and diagnosis are also disclosed. For example, doxorubicin and daunorubicin prodrugs containing a polyethylene glycol derivative were prepared

IT 660843-26-5P

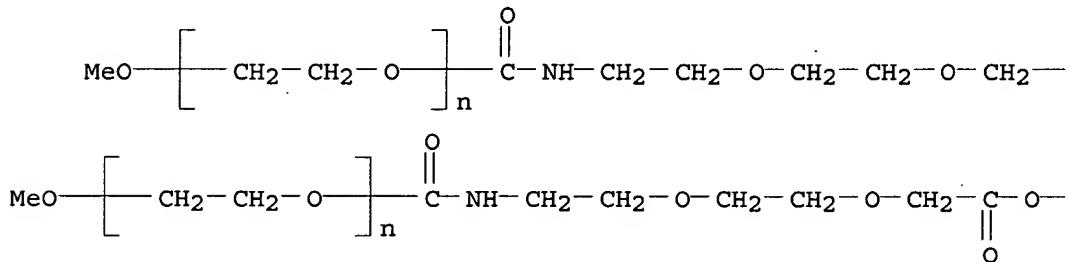
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of polymeric conjugates based on aliphatic biodegradable linkers

as prodrugs)

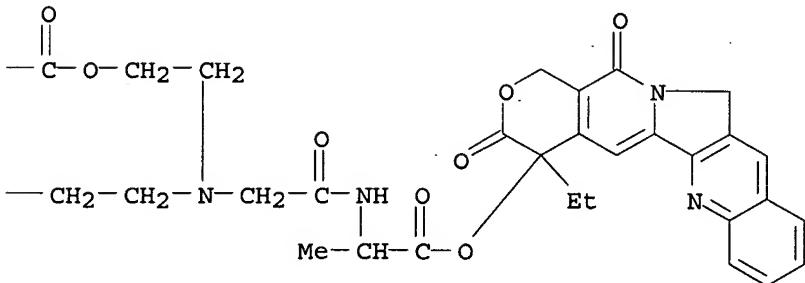
RN 660843-26-5 CAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -methoxy-, diester with N,N-bis[2-[[2-[2-(carboxyamino)ethoxy]ethoxy]acetyl]oxyethyl]glycyl-L-alanine 2-[(4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinolin-4-yl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



REFERENCE COUNT:

4

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

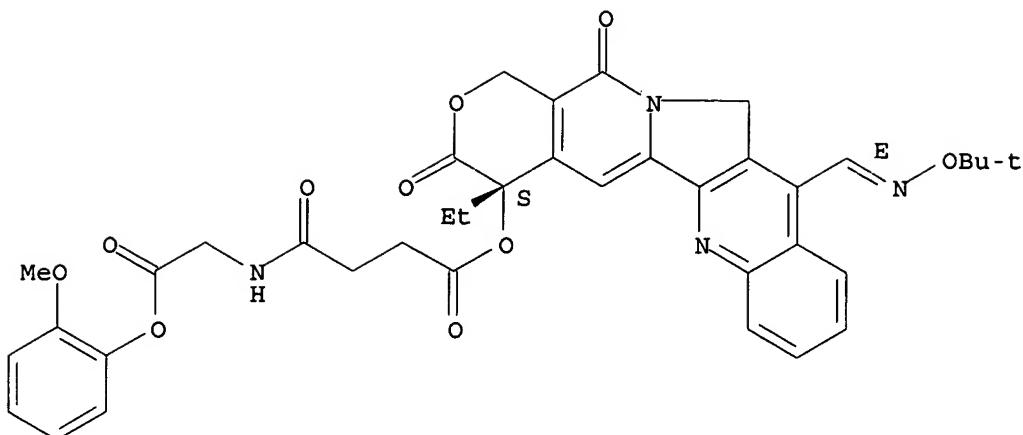
*Dr. Venkay*

L8 ANSWER 17 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN

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ACCESSION NUMBER: 2003:972082 CAPLUS  
DOCUMENT NUMBER: 140:16851  
TITLE: Preparation of esters in position 20 of camptothecins  
as antitumor agents  
INVENTOR(S): Marzi, Mauro; Alloatti, Domenico; Pisano, Claudio;  
Tinti, Maria Ornella; Vesci, Loredana; Zunino, Franco  
PATENT ASSIGNEE(S): Sigma-Tau Industrie Farmaceutiche Riunite S.p.A,  
Italy; Istituto Nazionale per lo Studio e la Cura dei  
Tumori  
SOURCE: PCT Int. Appl., 31 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.             | KIND  | DATE      | APPLICATION NO. | DATE       |
|------------------------|---|-----------|-----------------|------------|
| WO 2003101996          | A2  | 20031211  | WO 2003-IT329   | 20030528   |
| WO 2003101996          | A3  | 20040129  |                 |            |
| WO 2003101996          | C1  | 20040429  |                 |            |
| W:                     | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,<br>CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,<br>GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,<br>LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,<br>PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,<br>TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |           |                 |            |
| RW:                    | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,<br>KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,<br>FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,<br>BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |           |                 |            |
| CA 2487252             | AA  | 20031211  | CA 2003-2487252 | 20030528   |
| EP 1509529             | A2  | 20050302  | EP 2003-730481  | 20030528   |
| R:                     | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK   |           |                 |            |
| JP 2005529935          | T2  | 20051006  | JP 2004-509687  | 20030528   |
| PRIORITY APPLN. INFO.: |   |           | IT 2002-RM306   | A 20020531 |
|                        |   |           | WO 2003-IT329   | W 20030528 |
| OTHER SOURCE(S):       | MARPAT  | 140:16851 |                 |            |
| GI                     |   |           |                 |            |



L8 ANSWER 18 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:811568 CAPLUS

DOCUMENT NUMBER: 141:111318

TITLE: Assessment of normal and tumor tissue uptake of MAG-CPT, a polymer-bound prodrug of camptothecin, in patients undergoing elective surgery for colorectal carcinoma

AUTHOR(S): Sarapa, Nenad; Britto, Margaret R.; Speed, William; Jannuzzo, MariaGabriella; Breda, Massimo; James, Christopher A.; Porro, Maria Grazia; Rocchetti, Maurizio; Wanders, Alkvin; Mahteme, Haile; Nygren, Peter

CORPORATE SOURCE: Department of Clinical Pharmacology, Pharmacia Corporation, Skokie, IL, 60077, USA

SOURCE: Cancer Chemotherapy and Pharmacology (2003), 52(5), 424-430

CODEN: CCPHDZ; ISSN: 0344-5704

PUBLISHER: Springer-Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

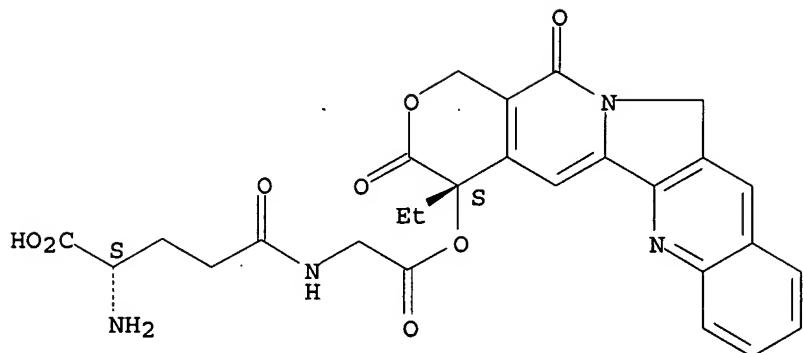
AB MAG-camptothecin (MAG-CPT) is the lead compound of a novel drug delivery system in which an active cytotoxic moiety, camptothecin (CPT), is covalently linked to a soluble polymeric carrier (MAG) to form an inactive prodrug. The mechanism of action of CPT remains unaltered, but the delivery system is thought to allow the carrier-bound drug to accumulate in tumor tissues and release the active CPT locally. This proof-of-concept clin. study was designed to determine whether MAG-CPT was preferentially delivered to or retained in tumor tissue compared to adjacent normal tissue or plasma, and to estimate the degree of intratissue release of CPT. MAG-bound and free CPT concns. in plasma, tumor, and normal tissue of patients achieved equilibrium by 24 h after dosing, declining in parallel up to 7 days after dosing. MAG-bound CPT was delivered to similar levels to tumor and normal tissue. At 24 h after dosing, the mean $\pm$ SD MAG-bound CPT concns. were 861 $\pm$ 216 ng/g in tumor and 751 $\pm$ 215 ng/g in adjacent normal tissue, and free CPT concns. were lower in tumor than in normal tissue (12.2 $\pm$ 4.7 ng/g and 21.9 $\pm$ 6.7 ng/g, resp.). At 24 h after dosing, mean $\pm$ SD ratios of MAG-bound and free CPT in tumor and plasma were 0.13 $\pm$ 0.03 and 0.22 $\pm$ 0.09, resp., and the ratios did not change for up to 7 days after dosing, indicating a lack of preferential retention of MAG-bound CPT or release of free CPT in tumor. These results are in marked contrast to previous data from animal tumor xenograft studies, where MAG-CPT levels were higher in tissue than in plasma at 3 and 7 days after a single i.v. dose. Delivery of CPT to the

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CM 1

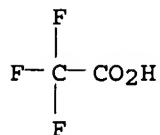
CRN 476651-89-5  
CMF C27 H26 N4 O8

Absolute stereochemistry.



CM 2

CRN 76-05-1  
CMF C2 H F3 O2



L8 ANSWER 24 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2002:917633 CAPLUS  
DOCUMENT NUMBER: 138:117380  
TITLE: Synthesis and in Vivo Antitumor Activity of Poly(L-glutamic acid) Conjugates of 20(S)-Camptothecin  
AUTHOR(S): Bhatt, Rama; de Vries, Peter; Tulinsky, John; Bellamy, Garland; Baker, Brian; Singer, Jack W.; Klein, Peter  
CORPORATE SOURCE: Cell Therapeutics, Inc., Seattle, WA, 98119, USA  
SOURCE: Journal of Medicinal Chemistry (2003), 46(1), 190-193  
CODEN: JMCMAR; ISSN: 0022-2623  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Poly- $\alpha$ -(L-glutamic acid) (PG) conjugates of 20(S)-camptothecin (CPT) displayed improved aqueous solubility compared to CPT, were stable in aqueous solution at neutral pH, and were potent antitumor agents in vivo. Evaluation of PG mol. weight, CPT loading, aqueous solubility, and CPT equivalent dosing with respect to in vivo antitumor potencies of various linked conjugates led to identification of a preferred conjugate composition  
IT 182691-89-0DP, conjugate with poly(L-glutamic acid)  
362496-92-2DP, conjugate with poly(L-glutamic acid)  
362496-97-7DP, conjugate with poly(L-glutamic acid)  
362497-02-7DP, conjugate with poly(L-glutamic acid)  
362497-07-2DP, conjugate with poly(L-glutamic acid)

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476654-49-6DP, conjugate with poly(L-glutamic acid)

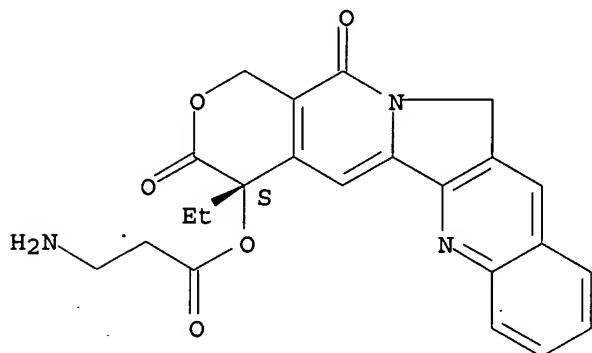
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(synthesis and in vivo antitumor activity of poly(L-glutamic acid) conjugates of 20(S)-camptothecin)

RN 182691-89-0 CAPLUS

CN  $\beta$ -Alanine, (4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyran[3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester (9CI) (CA INDEX NAME)

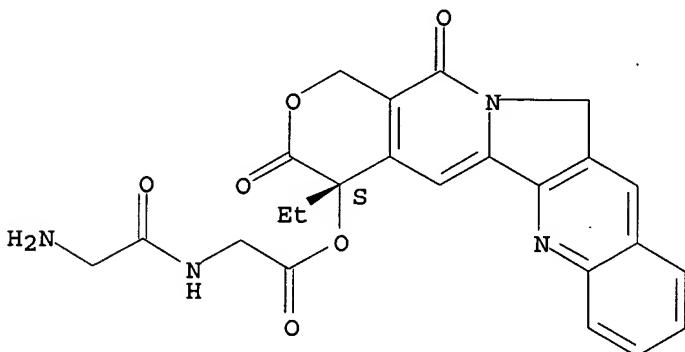
Absolute stereochemistry.



RN 362496-92-2 CAPLUS

CN Glycine, glycyl-, (4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyran[3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

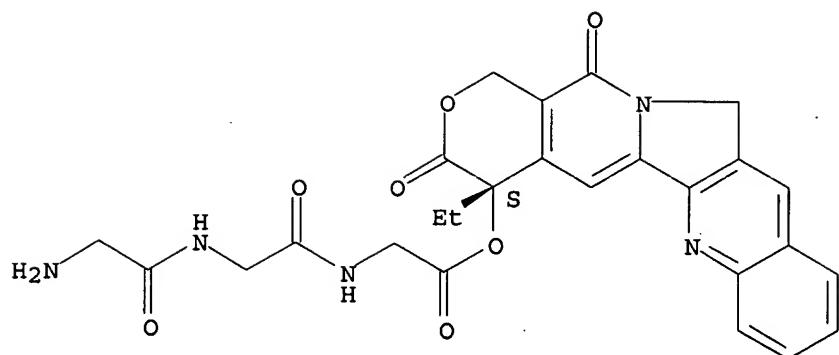


RN 362496-97-7 CAPLUS

CN Glycine, glycylglycyl-, (4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyran[3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

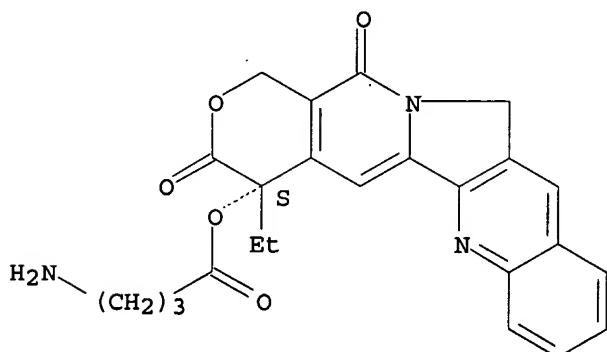
10/512,094



RN 362497-02-7 CAPLUS

CN Butanoic acid, 4-amino-, (4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester (9CI) (CA INDEX NAME)

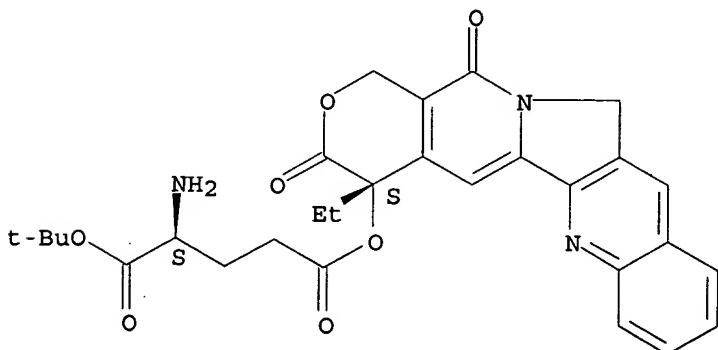
Absolute stereochemistry.



RN 362497-07-2 CAPLUS

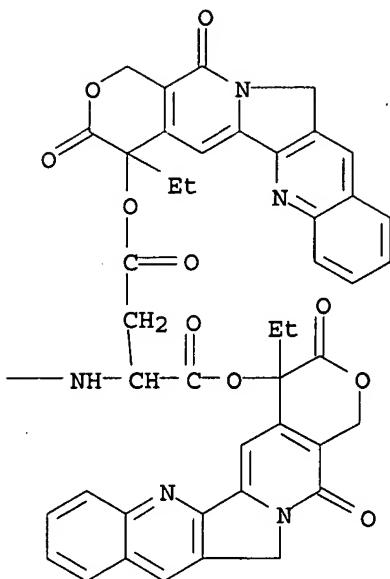
CN L-Glutamic acid, 1-(1,1-dimethylethyl) 5-[(4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinolin-4-yl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 476654-49-6 CAPLUS

CN L-Glutamic acid, 5-[(4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinolin-4-yl] ester (9CI) (CA INDEX



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 32 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:777238 CAPLUS  
 DOCUMENT NUMBER: 136:79270  
 TITLE: Design and Optimization of 20-O-Linked Camptothecin Glycoconjugates as Anticancer Agents  
 AUTHOR(S): Lerchen, Hans-Georg; Baumgarten, Joerg; von Bruch, Karsten; Lehmann, Thomas E.; Sperzel, Michael; Kempka, Grazyna; Fiebig, Heinz-Herbert  
 CORPORATE SOURCE: Central Research Life Sciences, Bayer AG, Leverkusen, 51368, Germany  
 SOURCE: Journal of Medicinal Chemistry (2001), 44(24), 4186-4195  
 CODEN: JMCMAR; ISSN: 0022-2623  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 136:79270  
 AB To improve the biol. profile of 20(S)-camptothecin, a novel class of 20-O-linked camptothecin glycoconjugates has been designed for preferential cellular uptake into tumor cells by an active transport mechanism. Such conjugates have been optimized for enhanced solubility, stabilization of the camptothecin lactone ring, sufficient hydrolytic and proteolytic stability, and for an overall improvement in tumor selectivity. The constitution of the peptide spacer has a major impact on stability and biol. activity of the conjugates both in vitro and in vivo. Some of Glycoconjugates with valine residues at the linkage position to camptothecin are sufficiently stable and show good antitumor activity in vitro against HT29 and other tumor cell lines. Fluorescence microscopy and flow cytometry expts. indicate that glycoconjugates are taken up into lysosomal compartments of the tumor cell line HT29 by an active transport mechanism. The steric configuration of the particular amino acid residues linked to the camptothecin moiety has a major impact on the in vivo activity of the corresponding glycoconjugates in the breast cancer xenograft MX-1 model. Inhibiting tumor growth by >96%, glycoconjugates show the best activity in this particular model and have been investigated

more extensively. One of the glycoconjugates compares favorably to topotecan and other glycoconjugate with respect to toxicity against hematopoietic stem cells and hepatocytes. Based on its profile, glycoconjugate (BAY 38-3441) has been selected for clin. trials.

IT 215604-74-3P, BAY 38-3441

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);  
SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological  
study); PREP (Preparation); USES (Uses)

## (design and optimization of 20-O-linked camptothecin glycoconjugates as anticancer agents)

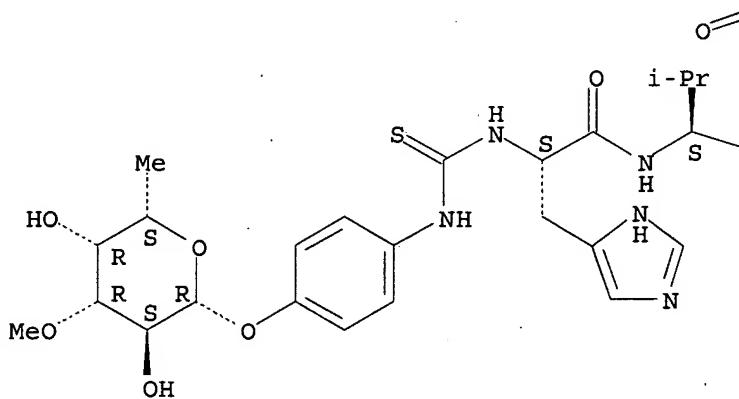
RN 215604-74-3 CAPLUS

CN L-Valine, N-[(4-[(6-deoxy-3-O-methyl-β-L-

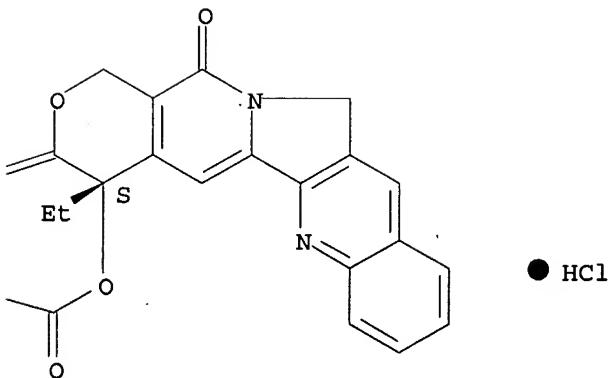
galactopyranosyl)oxy]phenyl]amino]thioxomethyl]-L-histidyl-,  
(4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-  
pyrano[3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester, monohydrochloride  
(9CI) (CA INDEX NAME)

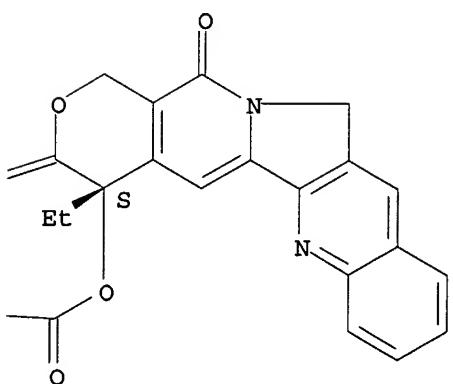
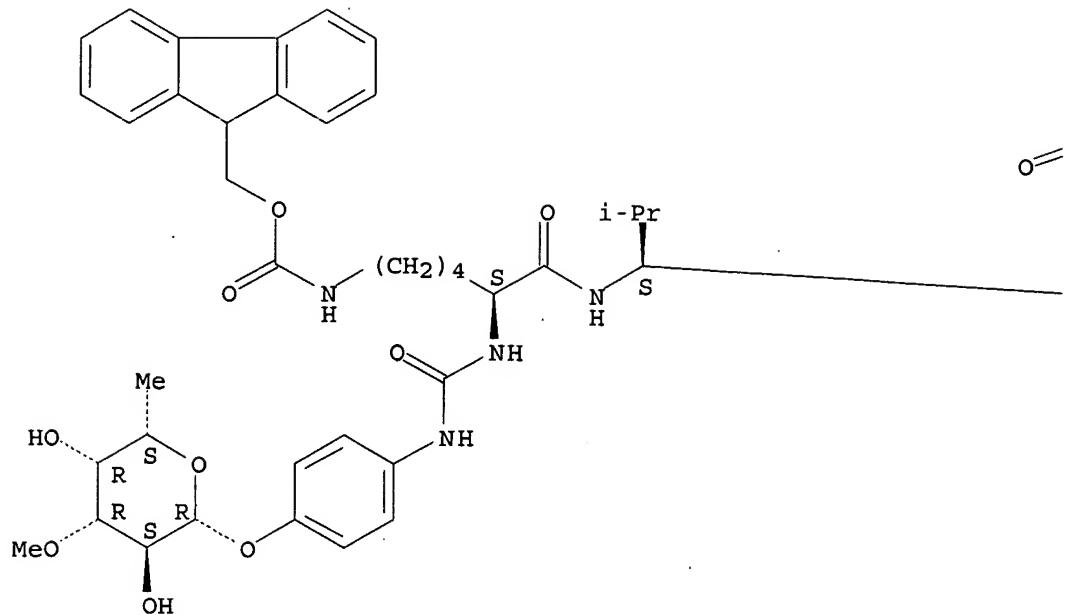
## Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

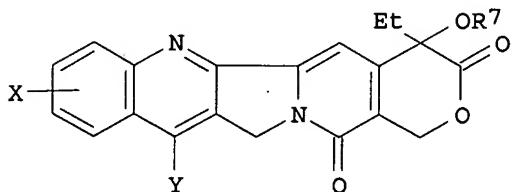




L8 ANSWER 37 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:507704 CAPLUS  
 DOCUMENT NUMBER: 135:77105  
 TITLE: Preparation of camptothecin  $\beta$ -alanine esters having topoisomerase I inhibitory activity  
 INVENTOR(S): Wall, Monroe E.; Wani, Mansukh C.; Manikumar, Govindarajan; Balasubramanian, Neelakantan; Vyas, Dolatrai  
 PATENT ASSIGNEE(S): USA  
 SOURCE: PCT Int. Appl., 22 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 2001049691   | A1   | 20010712 | WO 2000-US15033 | 20000614   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| US 6288072  | B1   | 20010911 | US 1999-474099  | 19991229   |
| CA 2396030  | AA   | 20010712 | CA 2000-2396030 | 20000614   |
| EP 1254141  | A1   | 20021106 | EP 2000-939454  | 20000614   |
| EP 1254141  | B1   | 20050817 |                 |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL   |      |          |                 |            |
| JP 2003519234   | T2   | 20030617 | JP 2001-550231  | 20000614   |
| AT 302204   | E    | 20050915 | AT 2000-939454  | 20000614   |
| NO 2002003175   | A    | 20020829 | NO 2002-3175    | 20020628   |
| PRIORITY APPLN. INFO.:  |      |          | US 1999-474099  | A 19991229 |
|   |      |          | WO 2000-US15033 | W 20000614 |

OTHER SOURCE(S) : MARPAT 135:77105  
GI



**AB** Camptothecin  $\beta$ -alanine esters I [X and Y are each independently NO<sub>2</sub>, NH<sub>2</sub>, H, F, Cl, Br, I, CO<sub>2</sub>H, OH, O-C<sub>1</sub>-6 alkyl, SH, S-C<sub>1</sub>-6 alkyl, CN, NH-C<sub>1</sub>-6 alkyl, N(C<sub>1</sub>-6 alkyl)<sub>2</sub>, CHO, C<sub>1</sub>-8 alkyl, N<sub>3</sub>, -Z(CH<sub>2</sub>)<sub>a</sub>N[(CH<sub>2</sub>)<sub>b</sub>OH]<sub>2</sub> or -Z(CH<sub>2</sub>)<sub>a</sub>N(C<sub>1</sub>-6 alkyl)<sub>2</sub>, where Z is O, NH, S and a and b are 2 or 3, -CH<sub>2</sub>-L, where L is halo, N<sub>2</sub><sup>+</sup>, OSO<sub>2</sub>CF<sub>3</sub>, acyl, alkyl- or arylsulfonyl, dialkylamino, etc.; R<sub>7</sub> is COCH<sub>2</sub>CH<sub>2</sub>NR<sub>8</sub>R<sub>9</sub> (R<sub>8</sub>, R<sub>9</sub> = H, C<sub>1</sub>-6 alkyl), CO(CH<sub>2</sub>)<sub>m</sub>NR<sub>10</sub>R<sub>11</sub> or COCHR<sub>12</sub>NR<sub>13</sub>R<sub>14</sub>, where m = 1 or 2, R<sub>12</sub> is the side chain of a naturally occurring  $\alpha$ -amino acid and R<sub>10</sub>, R<sub>11</sub>, R<sub>13</sub> and R<sub>14</sub> are H or C<sub>1</sub>-8 alkyl] and 3-X-substituted 4,5-(methylenedioxy)- or 4,5-(ethylenedioxy)benzo derivs. were prepared for use as antitumor agents. These compds. inhibit the enzyme topoisomerase I and may alkylate DNA of the associated topoisomerase I-DNA cleavable complex. Thus, 10,11-methylenedioxycamptothecin-20- $\beta$ -Ala-Lys ester dihydrochloride was prepared by esterification of 10,11-methylenedioxycamptothecin with Boc-Lys(BOC)- $\beta$ -Ala-OH (Boc = tert-butoxycarbonyl), followed by Boc-deprotection with HCl-saturated dioxane.

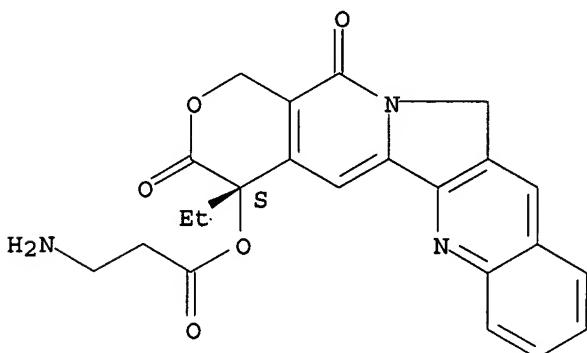
**IT** 182691-89-0P 347417-50-9P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of camptothecin  $\beta$ -alanine esters having topoisomerase I inhibitory activity)

**RN** 182691-89-0 CAPLUS

10/512,094

CN     $\beta$ -Alanine, (4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester (9CI)    (CA INDEX NAME)

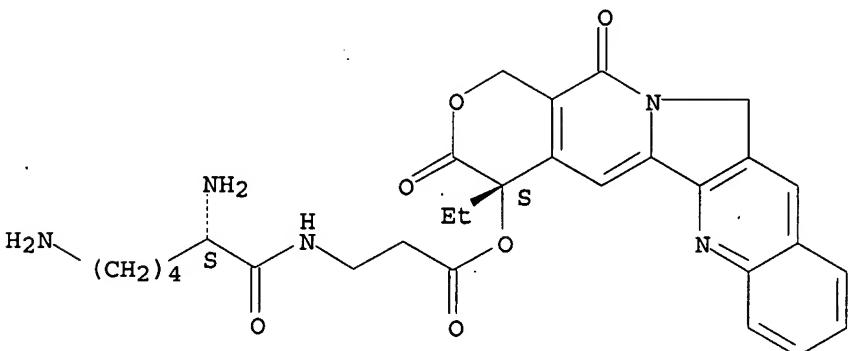
## Absolute stereochemistry.



RN 347417-50-9 CAPLUS

CN  $\beta$ -Alanine, L-lysyl-, (4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester (9CI) (CA INDEX NAME)

## Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

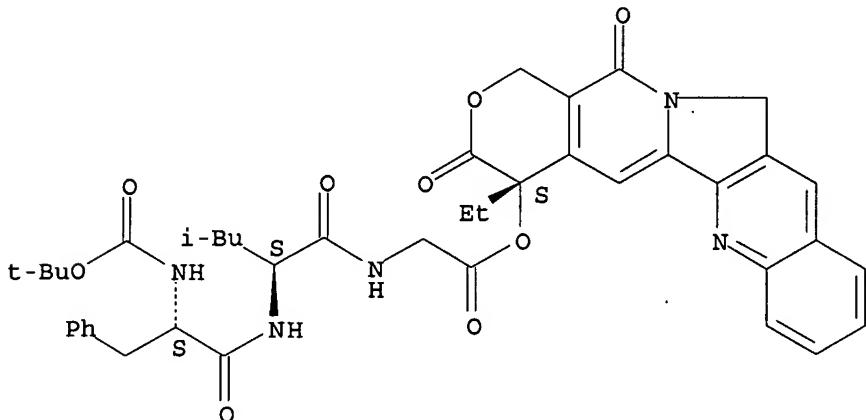
L8 ANSWER 38 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2001:468173 CAPLUS  
DOCUMENT NUMBER: 135:66230  
TITLE: Biodegradable high molecular weight polymeric linkers  
and their conjugates  
INVENTOR(S): Greenwald, Richard B.; Martinez, Anthony J.; Choe, Yun  
H.; Pendri, Annapurna  
PATENT ASSIGNEE(S): Enzon, Inc., USA  
SOURCE: U.S., 32 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

| PATENT NO. | KIND  | DATE  | APPLICATION NO. | DATE  |
|------------|-------|-------|-----------------|-------|
| -----      | ----- | ----- | -----           | ----- |

10/512,094

CN Glycine, N-[(1,1-dimethylethoxy)carbonyl]-L-phenylalanyl-L-leucyl-,  
(4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyranolo[3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

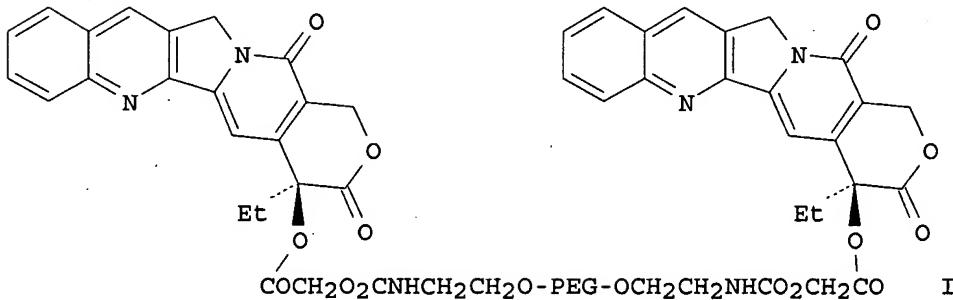
L8 ANSWER 47 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1999:690979 CAPLUS  
DOCUMENT NUMBER: 131:322821  
TITLE: Preparation of terminally-branched polymeric linkers and polymeric conjugates containing them as pro drugs.  
INVENTOR(S): Martinez, Anthony J.; Pendri, Annapurna; Greenwald, Richard B.; Choe, Yun H.  
PATENT ASSIGNEE(S): Enzon, Inc., USA  
SOURCE: PCT Int. Appl., 63 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

| PATENT NO.  | KIND   | DATE     | APPLICATION NO. | DATE       |
|---|--|----------|-----------------|------------|
| WO 9953951  | A1   | 19991028 | WO 1999-US8373  | 19990416   |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG |          |                 |            |
| US 6153655  | A  | 20001128 | US 1998-62305   | 19980417   |
| CA 2328922  | AA   | 19991028 | CA 1999-2328922 | 19990416   |
| AU 9936483  | A1   | 19991108 | AU 1999-36483   | 19990416   |
| EP 1071455  | A1   | 20010131 | EP 1999-918611  | 19990416   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO   |  |          |                 |            |
| JP 2002512265   | T2   | 20020423 | JP 2000-544354  | 19990416   |
| PRIORITY APPLN. INFO.:  |  |          | US 1998-62305   | A 19980417 |
|   |  |          | WO 1999-US8373  | W 19990416 |

L8 ANSWER 48 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1999:655948 CAPLUS  
 DOCUMENT NUMBER: 131:286688  
 TITLE: Preparation of high molecular weight polymer-based prodrugs  
 INVENTOR(S): Greenwald, Richard B.; Pendri, Annapurna; Zhao, Hong  
 PATENT ASSIGNEE(S): Enzon, Inc., USA  
 SOURCE: U.S., 39 pp., Cont.-in-part of U.S. 5,840,900.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 12  
 PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE        |
|------------------------|------|----------|-----------------|-------------|
| US 5965566             | A    | 19991012 | US 1997-914927  | 19970820    |
| US 5614549             | A    | 19970325 | US 1995-380873  | 19950130    |
| US 5880131             | A    | 19990309 | US 1995-537207  | 19950929    |
| US 5840900             | A    | 19981124 | US 1996-700269  | 19960820    |
| US 6127355             | A    | 20001003 | US 1999-277230  | 19990326    |
| PRIORITY APPLN. INFO.: |      |          | US 1993-140346  | B2 19931020 |
|                        |      |          | US 1995-380873  | A2 19950130 |
|                        |      |          | US 1995-537207  | A2 19950929 |
|                        |      |          | US 1996-700269  | A2 19960820 |
|                        |      |          | US 1992-934131  | B2 19920821 |
|                        |      |          | US 1993-28743   | B2 19930309 |
|                        |      |          | US 1997-914927  | A1 19970820 |

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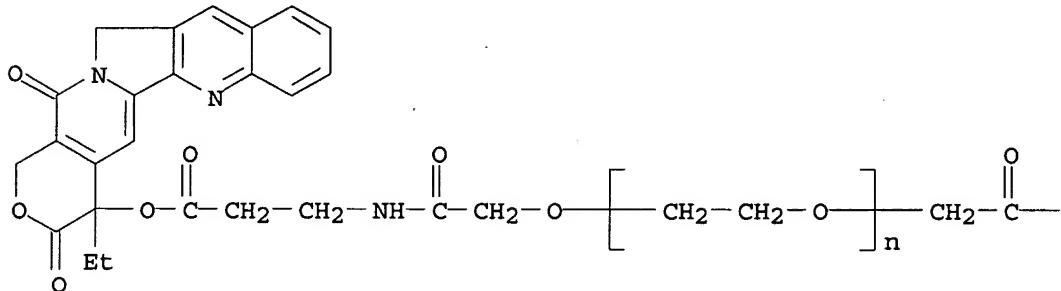
AB Compns. of formula DY1C(:Y)(CR1R2)nXR3 [D = biol. active moiety, e.g. camptothecin, paclitaxel, podophyllotoxin; Y, Y1 = O, S; R1, R2 = H, alkyl, aryl, heteroalkyl, etc.; n = 0-12; X = electron withdrawing group; R3 = non-antigenic polymer, e.g. polyethylene glycol (PEG) having a mol. weight of at least about 20,000, alkyl, cycloalkyl, acyl, carboalkoxy alkyl, dialkylaminoalkyl, phenylalkyl, phenylaryl] are prepared as water soluble prodrugs. Thus, I was prepared from camptothecin, benzyloxycylic acid and PEG(40k) bis(2-isocyanatoethyl) ether. I showed antileukemic (IC50 = 7 nM vs. P388) and antitumor activity (IC50 = 30 nM vs. HT-29).

IT 204133-45-9P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of water soluble polymer-based prodrugs from natural products)  
 RN 204133-45-9 CAPLUS  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -[2-[3-[[4S]-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinolin-4-

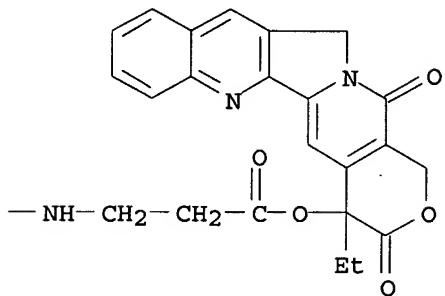
10/512,094

yl]oxy]-3-oxopropyl]amino]-2-oxoethyl]- $\omega$ -[2-[[3-[(4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinolin-4-yl]oxy]-3-oxopropyl]amino]-2-oxoethoxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 49 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1999:461752 CAPLUS  
DOCUMENT NUMBER: 131:276856  
TITLE: Multiple event activation of a generic prodrug trigger by antibody catalysis  
AUTHOR(S): Shabat, Doron; Rader, Christoph; List, Benjamin; Lerner, Richard A.; Barbas, Carlos F., III  
CORPORATE SOURCE: The Skaggs Institute for Chemical Biology and the Department of Molecular Biology, The Scripps Research Institute, La Jolla, CA, 92037, USA  
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1999), 96(12), 6925-6930  
CODEN: PNASA6; ISSN: 0027-8424  
PUBLISHER: National Academy of Sciences  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Chemotherapeutic regimes are typically limited by nonspecific toxicity. To address this problem we have developed a broadly applicable drug-masking chemical that operates in conjunction with a unique broad-scope catalytic antibody. This masking chemical is applicable to a wide range of drugs because it is compatible with virtually any heteroatom. We demonstrate that generic drug-masking groups may be selectively removed by sequential retro-aldolretro-Michael reactions catalyzed by antibody 38C2. This reaction cascade is not catalyzed by any known natural enzyme. Application of this masking chemical to the anticancer drugs doxorubicin and

camptothecin produced prodrugs with substantially reduced toxicity. These prodrugs are selectively unmasked by the catalytic antibody when it is applied at therapeutically relevant concns. We have demonstrated the efficacy of this approach by using human colon and prostate cancer cell lines. The antibody demonstrated a long in vivo half-life after administration to mice. Based on these findings, we believe that the system described here has the potential to become a key tool in selective chemotherapeutic strategies.

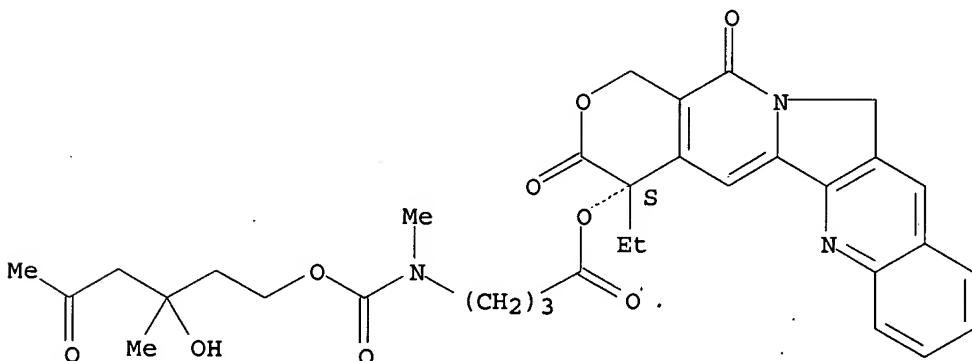
IT 245330-19-2P 245330-20-5P

RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)  
(multiple event activation of a generic prodrug trigger by antibody catalysis)

RN 245330-19-2 CAPLUS

CN Butanoic acid, 4-[[[(3-hydroxy-3-methyl-5-oxohexyl)oxy]carbonyl]methylamino]-, (4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyran-6-yl-(4'-indolizino[1,2-b]quinolin-4-yl ester (9CI) (CA INDEX NAME)

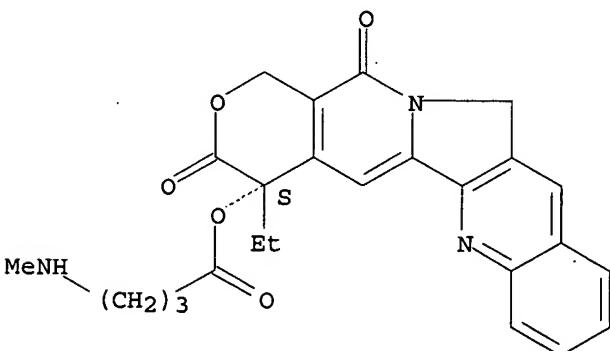
Absolute stereochemistry.



RN 245330-20-5 CAPLUS

CN Butanoic acid, 4-(methylamino)-, (4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyran-6-yl-(4'-indolizino[1,2-b]quinolin-4-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

16

THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10/512,094

ACCESSION NUMBER: 1999:249104 CAPLUS  
DOCUMENT NUMBER: 130:276739  
TITLE: Preparation of polymeric derivatives of camptothecins having antitumor activity  
INVENTOR(S): Angelucci, Francesco; Orzi, Fabrizio; Fachin, Gabriele; Caiolfa, Valeria; Zamai, Moreno; Suarato, Antonino  
PATENT ASSIGNEE(S): Pharmacia & Upjohn S.P.A., Italy  
SOURCE: PCT Int. Appl., 26 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

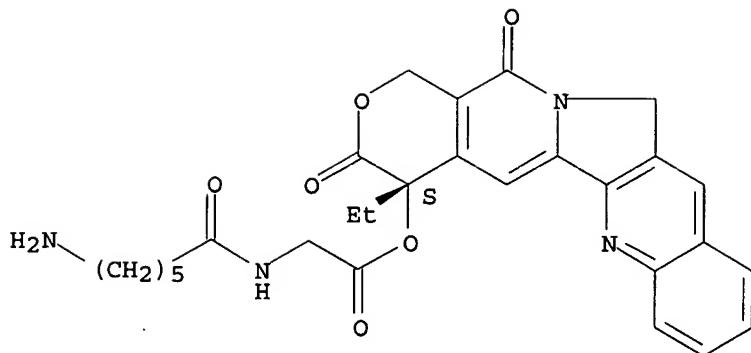
| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE       |
|---|------|----------|------------------|------------|
| WO 9917804  | A1   | 19990415 | WO 1998-EP6048   | 19980922   |
| W: AU, BG, BR, CA, CN, CZ, HR, HU, IL, JP, KR, MX, NO, NZ, PL, RO, SG, SI, UA, US, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                  |            |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  |      |          |                  |            |
| TW 564178   | B    | 20031201 | TW 1998-87115168 | 19980911   |
| CA 2303097  | AA   | 19990415 | CA 1998-2303097  | 19980922   |
| AU 9896273  | A1   | 19990427 | AU 1998-96273    | 19980922   |
| AU 749321   | B2   | 20020620 |                  |            |
| EP 1019090  | A1   | 20000719 | EP 1998-950071   | 19980922   |
| EP 1019090  | B1   | 20040218 |                  |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO                             |      |          |                  |            |
| JP 2001518521   | T2   | 20011016 | JP 2000-514673   | 19980922   |
| NZ 503879   | A    | 20020328 | NZ 1998-503879   | 19980922   |
| BR 9815236  | A    | 20020723 | BR 1998-15236    | 19980922   |
| AT 259662   | E    | 20040315 | AT 1998-950071   | 19980922   |
| PT 1019090  | T    | 20040531 | PT 1998-950071   | 19980922   |
| ES 2216317  | T3   | 20041016 | ES 1998-950071   | 19980922   |
| ZA 9808923  | A    | 19990412 | ZA 1998-8923     | 19980930   |
| MX 200003031  | A    | 20001110 | MX 2000-3031     | 20000328   |
| NO 2000001628   | A    | 20000329 | NO 2000-1628     | 20000329   |
| US 6328953  | B1   | 20011211 | US 2000-509534   | 20000331   |
| BG 104355   | A    | 20010131 | BG 2000-104355   | 20000419   |
| HK 1032005  | A1   | 20050401 | HK 2001-102639   | 20010412   |
| PRIORITY APPLN. INFO.:  |      |          | GB 1997-21069    | A 19971003 |
|   |      |          | WO 1998-EP6048   | W 19980922 |

AB Water soluble polymeric conjugates of camptothecin comprise N-(2-hydroxypropyl)methacryloylamide units linked via a spacer of the formula -Gly-(CH<sub>2</sub>)<sub>n</sub>-CO-Gly (n = 2-8 to the C-20 position of a camptothecin residue). The conjugates possess enhanced antitumor activity and decreased toxicity with respect to the free drug. A process for their preparation and pharmaceutical compns. containing them are also described.

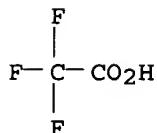
Thus, 20-O-[methacryloyl-glycyl-(6-aminohexanoyl)-glycyl]camptothecin 1.26, N-(2-hydroxypropyl)methacrylamide 4.4, and 2,2'-azobisisobutyronitrile 0.26 g were dissolved with anhydrous dimethylsulfoxide, kept 60° under nitrogen and stirred for 24 h. The reaction mixture was then cooled at room temp and poured into Et acetate to obtain a precipitate which was collected, washed, re-precipitated, and dried to obtain MAG-camptothecin (I). I was tested

on human colon carcinoma transplanted in nude mice. I was non-toxic and gave 95% tumor inhibition at all tested doses (15-22.5 mg/kg) with an exceptional high number of tumor-free animals after 90 days.

IT 246527-99-1P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological



CM 2

CRN 76-05-1  
CMF C2 H F3 O2

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 51 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1998:774306 CAPLUS  
 DOCUMENT NUMBER: 130:20601  
 TITLE: High molecular weight polymer-based prodrugs  
 INVENTOR(S): Greenwald, Richard B.; Pendri, Annapurna  
 PATENT ASSIGNEE(S): Enzon Inc., USA  
 SOURCE: U.S., 33 pp., Cont.-in-part of U.S. Ser. No. 537,207.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 12  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| US 5840900  | A    | 19981124 | US 1996-700269  | 19960820 |
| US 5614549  | A    | 19970325 | US 1995-380873  | 19950130 |
| US 5880131  | A    | 19990309 | US 1995-537207  | 19950929 |
| CA 2263409  | AA   | 19980226 | CA 1997-2263409 | 19970820 |
| WO 9807713  | A1   | 19980226 | WO 1997-US14692 | 19970820 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,<br>DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ,<br>LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL,<br>PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ,<br>VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |          |
| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR,<br>GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,<br>GN, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
| AU 9740794  | A1   | 19980306 | AU 1997-40794   | 19970820 |
| AU 730244   | B2   | 20010301 |                 |          |

|  |    |                 |                |          |
|--|----|-----------------|----------------|----------|
| EP 923566  | A1 | 19990623        | EP 1997-938484 | 19970820 |
| EP 923566  | B1 | 20031029        |                |          |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO |    |                 |                |          |
| US 5965566   | A  | 19991012        | US 1997-914927 | 19970820 |
| NZ 334283  | A  | 20000327        | NZ 1997-334283 | 19970820 |
| JP 2000517304  | T2 | 20001226        | JP 1998-510949 | 19970820 |
| AT 253060  | E  | 20031115        | AT 1997-938484 | 19970820 |
| PT 923566  | T  | 20040331        | PT 1997-938484 | 19970820 |
| ES 2210564   | T3 | 20040701        | ES 1997-938484 | 19970820 |
| US 6127355   | A  | 20001003        | US 1999-277230 | 19990326 |
| PRIORITY APPLN. INFO.:   |    |                 |                |          |
|  |    | US 1993-140346  | B2             | 19931020 |
|  |    | US 1995-380873  | A2             | 19950130 |
|  |    | US 1995-537207  | A2             | 19950929 |
|  |    | US 1992-934131  | B2             | 19920821 |
|  |    | US 1993-28743   | B2             | 19930309 |
|  |    | US 1996-700269  | A              | 19960820 |
|  |    | US 1997-914927  | A1             | 19970820 |
|  |    | WO 1997-US14692 | W              | 19970820 |

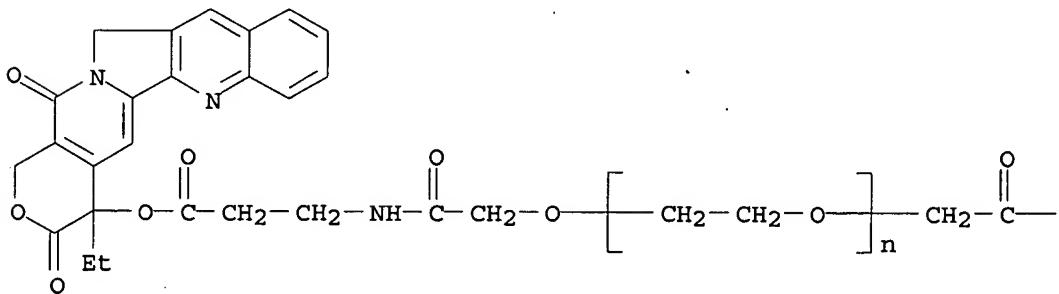
**AB** The present invention concerns polymeric prodrugs, DY' C(:Y) (CH<sub>2</sub>)<sub>n</sub>R<sub>1</sub>X<sub>2</sub>, (where D is a biol: active moiety; X is an electron withdrawing group; Y and Y' are independently O or S; R<sub>1</sub> = H, C<sub>1</sub>-6 alkyl, aryl, substituted aryl, aralkyl, heteroalkyl, n = 1-12; and R<sub>2</sub> is a polyalkylene oxide). In preferred embodiments, the prodrugs contain a polyethylene glycol having a mol. weight of at least about 20,000. Thus, camptothecin 20-O ester of benzylxyacetic acid was prep'd. and hydrogenolyzed, and the resulting product was treated with N,N-carbonyldiimidazole and PEG diisocyanate. The antileukemia activity of some of the prodrugs was demonstrated.

**IT** 204133-45-9P  
**RL:** BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of high mol. weight polymer-based prodrugs)

**RN** 204133-45-9 CAPLUS

**CN** Poly(oxy-1,2-ethanediyl),  $\alpha$ -[2-[3-[(4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinolin-4-yl]oxy]-3-oxopropyl]amino]-2-oxoethyl]- $\omega$ -[2-[3-[(4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinolin-4-yl]oxy]-3-oxopropyl]amino]-2-oxethoxy]-(9CI) (CA INDEX NAME)

PAGE 1-A

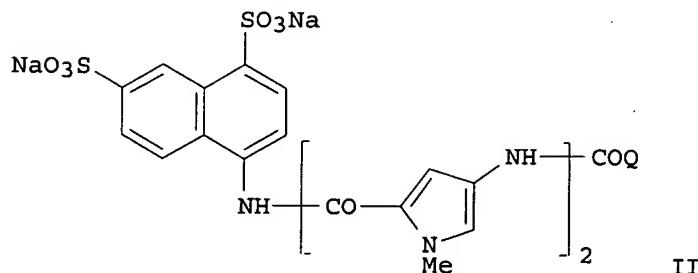
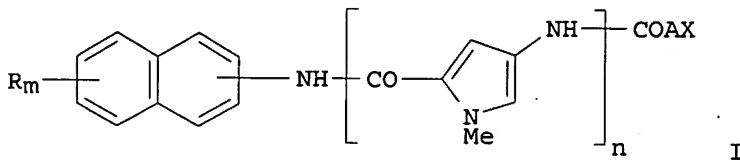


## RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

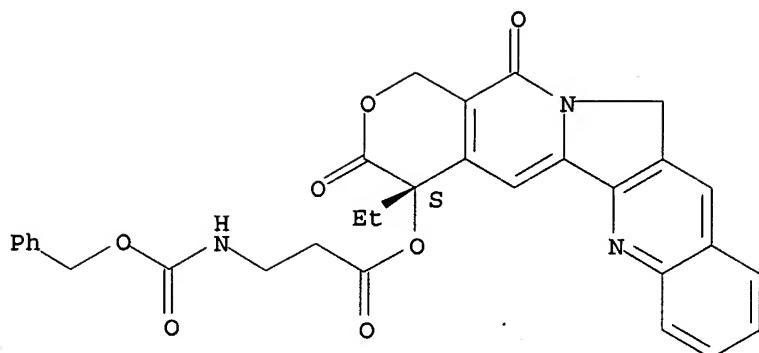
L8 ANSWER 56 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1996:656434 CAPLUS  
 DOCUMENT NUMBER: 125:300690  
 TITLE: Preparation of conjugates of biologically active compounds with polypyrrrolecarboxamidonaphthalene derivatives with increased bioavailability.  
 INVENTOR(S): Mongelli, Nicola; Biasoli, Giovanni; Lombardi Borgia, Andrea; Ciomei, Marina; Pesenti, Enrico; Angelucci, Francesco  
 PATENT ASSIGNEE(S): Pharmacia S.P.A., Italy  
 SOURCE: PCT Int. Appl., 70 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 9626950  | A1   | 19960906 | WO 1996-EP528   | 19960208   |
| W: AM, AU, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN, AZ, BY, KG, KZ, RU |      |          |                 |            |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  |      |          |                 |            |
| CA 2189358  | AA   | 19960906 | CA 1996-2189358 | 19960208   |
| AU 9648698  | A1   | 19960918 | AU 1996-48698   | 19960208   |
| AU 696470   | B2   | 19980910 |                 |            |
| EP 758339   | A1   | 19970219 | EP 1996-904024  | 19960208   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, NL, PT, SE   |      |          |                 |            |
| CN 1148391  | A    | 19970423 | CN 1996-190152  | 19960208   |
| JP 10504319   | T2   | 19980428 | JP 1996-525980  | 19960208   |
| ZA 9601636  | A    | 19960906 | ZA 1996-1636    | 19960229   |
| FI 9604331  | A    | 19961101 | FI 1996-4331    | 19961028   |
| NO 9604610  | A    | 19961031 | NO 1996-4610    | 19961031   |
| PRIORITY APPLN. INFO.:  |      |          | GB 1995-4065    | A 19950301 |
|   |      |          | WO 1996-EP528   | W 19960208 |

OTHER SOURCE(S): MARPAT 125:300690  
 GI



10/512,094



RN 182691-90-3 CAPLUS

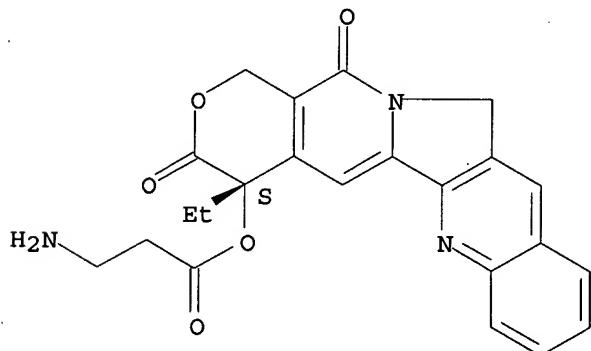
CN  $\beta$ -Alanine, 4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester, (S)-, monoformate (9CI) (CA INDEX NAME)

CM 1

CRN 182691-89-0

CMF C23 H21 N3 O5

Absolute stereochemistry.



CM 2

CRN 64-18-6

CMF C H2 O2

O=CH-OH

L8 ANSWER 57 OF 57 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:665139 CAPLUS

DOCUMENT NUMBER: 123:65831

TITLE: Polymer-bound camptothecin derivatives

INVENTOR(S): Angelucci, Francesco; Suarato, Antonino

PATENT ASSIGNEE(S): Pharmacia S.P.A., Italy

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 9510304  | A1   | 19950420 | WO 1994-EP3154  | 19940921   |
| W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, FI, GE, HU, JP, KE, KG, KP,<br>KR, KZ, LK, LT, LV, MD, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SI,<br>SK, TJ, TT, UA, US, UZ, VN |      |          |                 |            |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  |      |          |                 |            |
| CA 2150132  | AA   | 19950420 | CA 1994-2150132 | 19940921   |
| AU 9477836  | A1   | 19950504 | AU 1994-77836   | 19940921   |
| AU 679788   | B2   | 19970710 |                 |            |
| EP 673258   | A1   | 19950927 | EP 1994-928387  | 19940921   |
| EP 673258   | B1   | 20030507 |                 |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, NL, PT, SE   |      |          |                 |            |
| CN 1115564  | A    | 19960124 | CN 1994-190775  | 19940921   |
| HU 71678  | A2   | 19960129 | HU 1995-2084    | 19940921   |
| HU 215588   | B    | 19990128 |                 |            |
| JP 08504217   | T2   | 19960507 | JP 1995-511221  | 19940921   |
| PL 178132   | B1   | 20000331 | PL 1994-309328  | 19940921   |
| RU 2149646  | C1   | 20000527 | RU 1995-112841  | 19940921   |
| AT 239507   | E    | 20030515 | AT 1994-928387  | 19940921   |
| PT 673258   | T    | 20030930 | PT 1994-928387  | 19940921   |
| ES 2198421  | T3   | 20040201 | ES 1994-928387  | 19940921   |
| IL 111173   | A1   | 19981030 | IL 1994-111173  | 19941005   |
| ZA 9407823  | A    | 19950703 | ZA 1994-7823    | 19941006   |
| FI 9502746  | A    | 19950605 | FI 1995-2746    | 19950605   |
| US 5773522  | A    | 19980630 | US 1995-448330  | 19950608   |
| PRIORITY APPLN. INFO.:  |      |          | GB 1993-20781   | A 19931008 |
|   |      |          | WO 1994-EP3154  | W 19940921 |

AB A water-soluble polymeric conjugates with antitumor activity consist of (i) 60-99 mol% N-(2-hydroxypropyl)methacryloylamide units, (ii) 1-40 mol% 20-O-(N-methacryloylglycylaminoacyl)camptothecin units, and (iii) 0-10 mol% N-methacryloylglycine or N-(2-hydroxypropyl)methacryloylglycinamide units. Copolymer of N-(2-hydroxypropyl)methacryloylamide, 20-O-[N-methacryloylglycyl-(6-aminohexanoyl)]camptothecin, and N-(2-hydroxypropyl)methacryloylglycinamide was prepared and released 10% camptothecin after 120 h.

IT 164725-90-0P 164725-92-2P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of antitumor camptothecin polymer conjugates)

RN 164725-90-0 CAPLUS

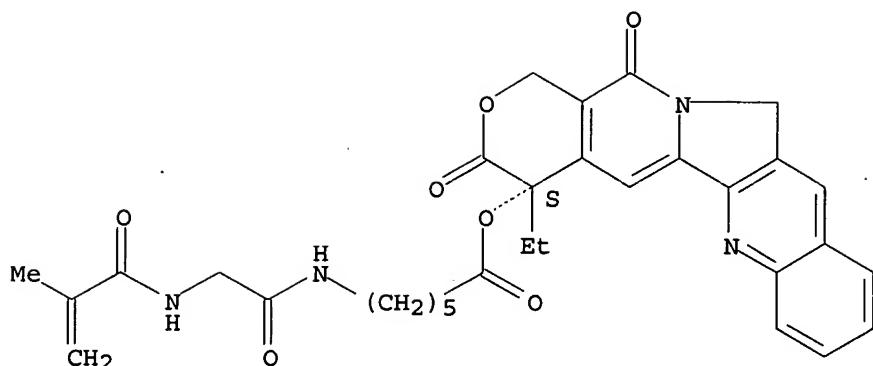
CN Hexanoic acid, 6-[[[(2-methyl-1-oxo-2-propenyl)amino]acetyl]amino]-, 4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyran-3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester, (S)-, polymer with N-[2-[(2-hydroxypropyl)amino]-2-oxoethyl]-2-methyl-2-propenamide and N-(2-hydroxypropyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 164725-89-7  
 CMF C32 H34 N4 O7

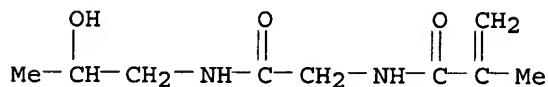
Absolute stereochemistry.

10/512,094



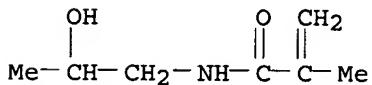
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CRN 153986-34-6  
CMF C9 H16 N2 O3



CM 3

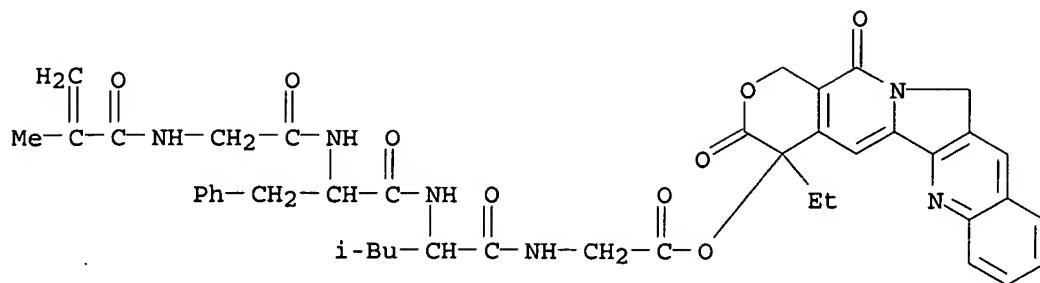
CRN 21442-01-3  
CMF C7 H13 N O2



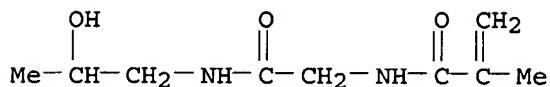
RN 164725-92-2 CAPLUS  
CN Glycine, N-[N-[N-(2-methyl-1-oxo-2-propenyl)glycyl]-L-phenylalanyl]-L-leucyl-, 4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyranolo[3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester, (S)-, polymer with N-[2-[(2-hydroxypropyl)amino]-2-oxoethyl]-2-methyl-2-propenamide and N-(2-hydroxypropyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

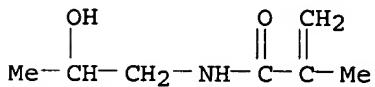
CRN 164725-91-1  
CMF C43 H46 N6 O9



CM 2

CRN 153986-34-6  
CMF C9 H16 N2 O3

CM 3

CRN 21442-01-3  
CMF C7 H13 N O2

IT 164725-96-6P 164725-97-7P

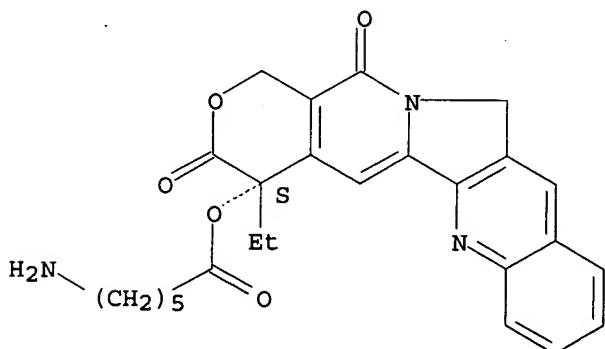
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of antitumor camptothecin polymer conjugates)

RN 164725-96-6 CAPLUS

CN Hexanoic acid, 6-amino-, 4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyranono[3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

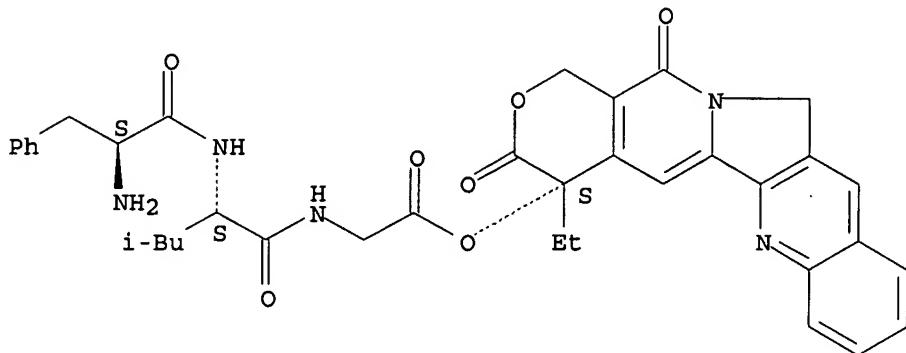


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RN 164725-97-7 CAPLUS

CN Glycine, L-phenylalanyl-L-leucyl-, (4S)-4-ethyl-3,4,12,14-tetrahydro-3,14-dioxo-1H-pyranolo[3',4':6,7]indolizino[1,2-b]quinolin-4-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> d his

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FILE 'REGISTRY' ENTERED AT 12:07:14 ON 03 NOV 2005

L1 STRUCTURE UPLOADED

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L4 164 S L3

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L5 STRUCTURE UPLOADED

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L7 779 S L5 FULL

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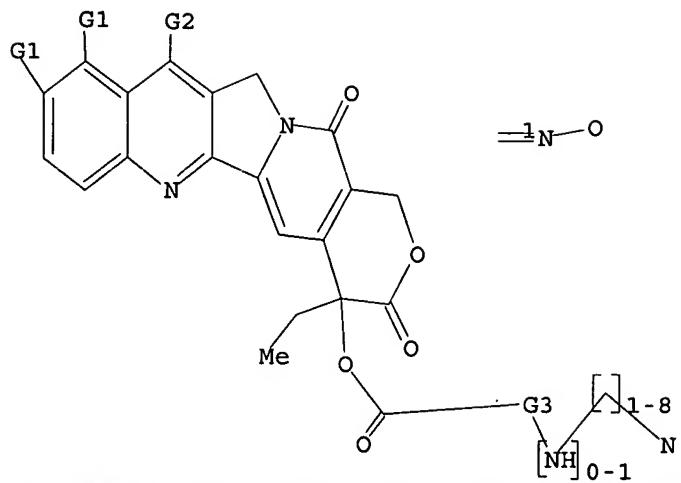
L8 57 S L7

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L5 HAS NO ANSWERS

L5 STR

10/512,094



G1 H, OH, MeO, EtO, n-PrO, i-PrO, n-BuO, i-BuO, s-BuO, t-BuO

G2 H, [@1]

G3 Cb, Ak

Structure attributes must be viewed using STN Express query preparation.

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